BENEFON CONFIGURATOR

for the Benefon Track Pro

Publication number:YZ2680-4

NOTE: This manual is intended for guidance when making initial and major configurations for the Benefon Track Pro mobile phones; however, it does not replace the phone´s own manual. Use this manual concurrently with the phone´s own manual.

Also note that separate MPTP document with details is required for the remote operation and configuration of the phone.

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Some of the features described in this manual are optional and intended to be purchased separately. For more information, please contact your dealer.

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CONFIGURING SETTINGS FOR THE BENEFON TRACK PRO

There are several ways to configure settings for the Benefon Track Pro:

- A: You can use the **MPTP commands**, and transfer settings *remotely*, over the air by sending a protocol message to the phone. The MPTP commands can be sent as a command string or through a specific software, such as the Benefon In Charge.
- B: You can use AT commands for configuring settings and transfer them to the phone *locally*, via the BW data/NMEA cable. This can be easily done by using the **Benefon Configurator** software. In some cases the BW cable must be purchased separately, it might not be included in the sales package of the phone.
- C: Limited set of features or purchased software options may be available for configuration through the **phone´s own menu**.

A: MPTP MESSAGES AND REMOTE CONFIGURATION (OTA)

MPTP configuration commands are used when a remote update of the phone configuration is needed.

Update can include all telematics settings and phone numbers, such as emergency numbers, status messages, authorized numbers, GPS operating mode. MPTP updates also include commands for daily usage, such as location request and tracking commands.

The remote configuration can be used for transferring the settings only in case the settings are coded as MPTP messages.

For more information on MPTP messages, please see the separate document: **Mobile Phone Telematics Protocol (MPTP)**, located at the Web site: **www.benefon.com**.

To receive full documentation, please contact your Benefon Partner.

B: THE BENEFON CONFIGURATOR SOFTWARE AND LOCAL CONFIGURATION

The Benefon Configurator software is intended for configuring settings locally for the Benefon products, e.g. Track Pro.

This configuration manual contains features available for the Track Pro NT 2.0.

Since the Benefon Configurator is very easy to use, it is advisable to make initial and other major configurations for the phone with this software.

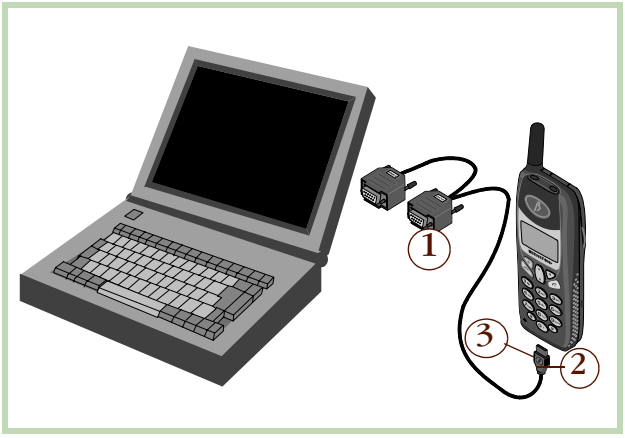
When you are finished with editing the settings, you can either transfer the settings back to the phone via the BW cable immediately, or save them in a computer disk (as any normal file) for further use.

Another, slightly quicker way to transfer configurations made by Benefon Configurator is to use some other application, e.g. the SetupLoad software. For more information on it, please contact your dealer.

The Benefon Configurator application window is split up in two sections:

- The Benetree structure is located on the left. It consists of two main nodes: My Benefon (on-line) and My Computer (off-line). By clicking the main nodes, you have access to their sub-nodes. The software consists of several groups of settings mainly structured as sub-nodes, such as: **Short messages**, **Phone books**, **User settings**, **Telematics settings**, **GPS settings** and so on. By clicking the sub-nodes, you have access to the corresponding Benefon Configurator document files.
- The Document window is located on the right. The setting groups may be divided up into interleaves including several separate data fields, such as **Tracking settings**, **Emergency settings**, **GPS settings**, **Message settings**, **Protocol settings** and so on.

Connecting the phone to the Benefon Configurator software



1. The BW cable may contain one or two square-end adapters. Plug the data adapter (1) into a serial port. Serial ports are located at the back panel of your computer.
2. Plug the flat end of the BW cable (2) in the system connector, located at the bottom of the phone. Make sure the release button (3) is facing up.
3. Open the **Benefon Configurator**.
4. Choose the correct serial port from the toolbar: Click the pop-up menu and highlight the desired port.

Or, choose **Settings** from the **Edit** menu. Select the **Default communication port** by clicking the check box. Click **Ok** to exit the menu.

THE MAIN IDEA IS THAT THE PORT SELECTED IN SOFTWARE MATCHES WITH THE PORT, THE DATA ADAPTER IS PLUGGED IN.

5. Double-click the main node **My Benefon**. **Or**, double-click the phone icon. **Or**, choose **Connect** from the **Mobile** menu. **Or**, click the button **Connect** located on the toolbar.

6. The software establishes a connection to the phone and renames **My Benefon** node according to the type and the model of the phone, e.g. **Track Pro**.

7. At the same time, the software reads data from the phone and loads it in the display. The data contains currently existing settings and menus from the phone. These settings and menus are shown as sub-nodes, such as **Messages, User settings,** and **Telematics settings**.
8. If the software requests security code while loading the settings, you must key in the code and press **Ok**. For more information on security code, see SECURITY CODE FOR TELEMATICS AND GPS ON PAGE 57.
9. Click the name label, e.g. **Track Pro**. The sub-nodes will be displayed as icons on the working area, i.e. the Document window, on the right.
10. You can select the desired sub-node/icon by clicking it. The data fields will be displayed.

Loading settings from the phone to the software

As you connect the phone to the software, all current settings in the phone are copied to the software.

To load only part of the settings to the software, choose **Configurator...** from the **Edit** menu (before pressing **Connect** button). Check the desired setting groups - the groups are shown in the **Mobile phone start up tasks**. Click **Ok** while the dialog box is displayed.

Unloaded settings can be loaded afterwards in the same session by choosing **Open NNsettings** from the **Mobile** menu.

Saving settings in a computer disk

If the phone is not currently connected to the software, you can still make configurations, save them and transfer them to the phone afterwards. When working in off-line, data fields are available for editing via **My Computer** node.

1. To save data in a computer disk, choose **Save as...** from the **File** menu.
2. Select the destination drive and folder, and rename the file the way you like. Click **Save**. The software stores all data fields that the chosen node contains.

Changing default mobile phone

When any Benefon phone (or device) is connected to the Benefon Configurator, the software identifies it automatically, and offers you the correct data fields for editing.

To make off-line configuration for some other Benefon phone (e.g. Esc!) when the phone is currently unavailable, you need to change the default mobile phone in Benefon Configurator.

1. Change the default Benefon mobile phone by selecting **Configurator...** from the **Edit** menu, or highlighting the desired phone model from the pop-up menu, located on the toolbar.
2. Now the data fields of this "new" phone model are available and can be opened from the **My Computer** node on the left.
3. Click the desired node, e.g. **User settings**, press the mouse´s right button and select **New** >**Ok**.
4. Similarily, you can close the file which is not needed any more by clicking it, pressing the mouse´s right button and selecting **Close**.

Transferring settings from the software to the phone

While the Benefon Configurator software is connected to the phone, you can save data in the phone.

1. First open the Benefon Configurator document which content you want to save in the phone. To recall settings previously stored in a computer disk, select **Open** from the **File** menu, or press the corresponding function icon on the toolbar.

2. Choose **Save To Mobile** from the **File** menu.
   Or, click the function icon on the toolbar.

When transferring data to the phone, the previous data is replaced with the new data.

Disconnecting the phone from the software

1. Choose **Disconnect** from the **Mobile** menu.
   Or, click the button **Disconnect** on the toolbar.

2. Press and hold down the release button while removing the BW cable from the phone. (The release button is located on the top of the flat end of the BW cable.)
3. Gently pull the BW cable from the system connector (located at the bottom of the phone).

ACTIVATING NEW FEATURES

Some of the new features are sold separately, they are not included in the basic NT 2.0 software package. Such features are, e.g. Waypoint tracking, CSD trace download, Encryption, Vertical sensor and Update of an old software into the new NT 2.0 software.

When you purchase these new features, a **Service activation key** is provided to you by the dealer or the manufacturer. The key is needed for activating the features. Activation can be easily done with the Benefon Configurator.

1. First make sure, the phone has cable connection to the Benefon Configurator.
2. Click **Connect**.
3. Select **Save activation key** from the **Mobile** menu.
4. Key in the **Service activation key**. (Note that when updating the software, the phone may inform you of the incorrect software version. You have then less than 2 minutes time to key in the activation key until the phone will power off itself. The key can be stored while the software is still reading data.)
5. Click **Save**.
6. Click **Disconnect**.

SIM FEATURES: SHORT MESSAGES

Reading and editing existing messages

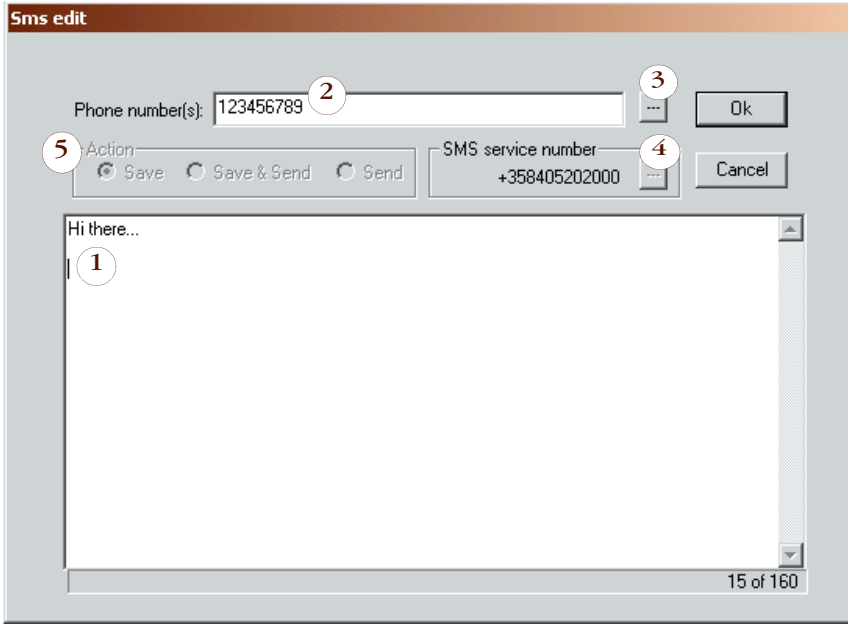
1. Double-click the icon **SMS messages**.
2. Messages are listed and can be read.
3. Double-click the message you want to edit.
4. Edit text and other details in the **SMS edit** buffer.
5. Click **Ok** when ready.

Deleting a short message

To delete a short message, highlight the message and choose **Sms**, **Delete message** from the **Edit** menu.

You can also select **Delete** by pressing the mouse´s right button.

Writing and sending a short message

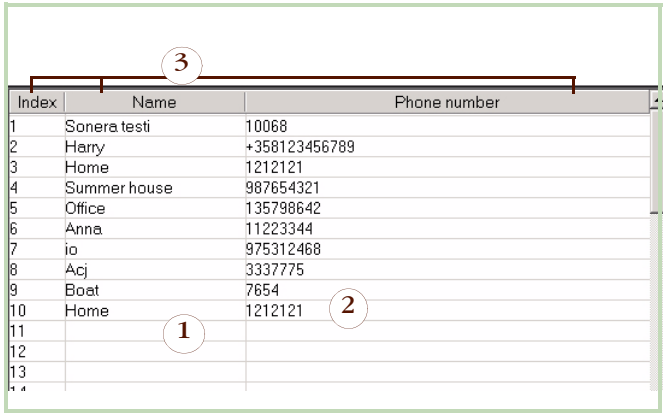


1. Choose **Sms**, **New message** from the **Edit** menu. The **SMS edit** buffer will be displayed.
2. Key in the message text (1) and the recipient´s number (2). By clicking the square next to the number (3), the recipient´s number can be fetched from the **Phone book**, assuming the number is found on SIM.
3. Make sure, the **Sms service number** is correct. The number can be changed by clicking the square next to it (4). By selecting the option **SIM card default**, the SMS service number will be picked up from the SIM card. If the SIM card does not contain the SMS number, select the option **Own** and key in the SMS service number.
4. Select the desired Saving/Sending option by checking one of the **Action** boxes (5).
5. Complete the message by pressing **Ok**.

SIM FEATURES: PHONE BOOKS

As you open the **Phone books**, the memory entries stored on the SIM card are listed and can be processed.

Index number stands for memory slot number.



Editing and adding an entry

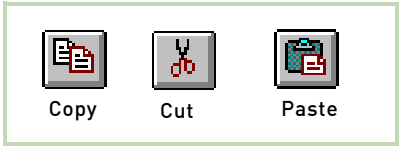
1. To edit details of an entry, click the desired entry. To add a new phone book entry, click a blank line (1).
2. Key in the name and number (2).
3. By pressing Tab on the keyboard you can move from a data field to another.

Deleting entries

1. To delete a phone book entry, click the desired entry.
2. Press **Delete** on the keyboard. You can also choose the command **Delete** from the **Edit** menu, or by clicking the mouse´s right button.

Moving and copying entries

1. To move or copy a phone book entry to another slot, click the desired entry.
2. Press **Ctrl**+**C** (for copy) or **Ctrl**+**X** (for cut) on the keyboard. Click the destination line and press **Ctrl**+**V** (for paste) on the keyboard.
   You can also choose the commands **Copy**, **Cut** and **Paste** from the **Edit** menu, or by clicking the mouse´s right button.
   Or, you can click the corresponding function icons on the toolbar.



3. If the destination line is reserved, you also need to confirm, whether to overwrite the old information or not.
   - To overwrite the old information, click **Yes** in the dialog box.
   - To preserve the old information and transfer the new information to another, free slot (Index number), click **No** in the dialog box.

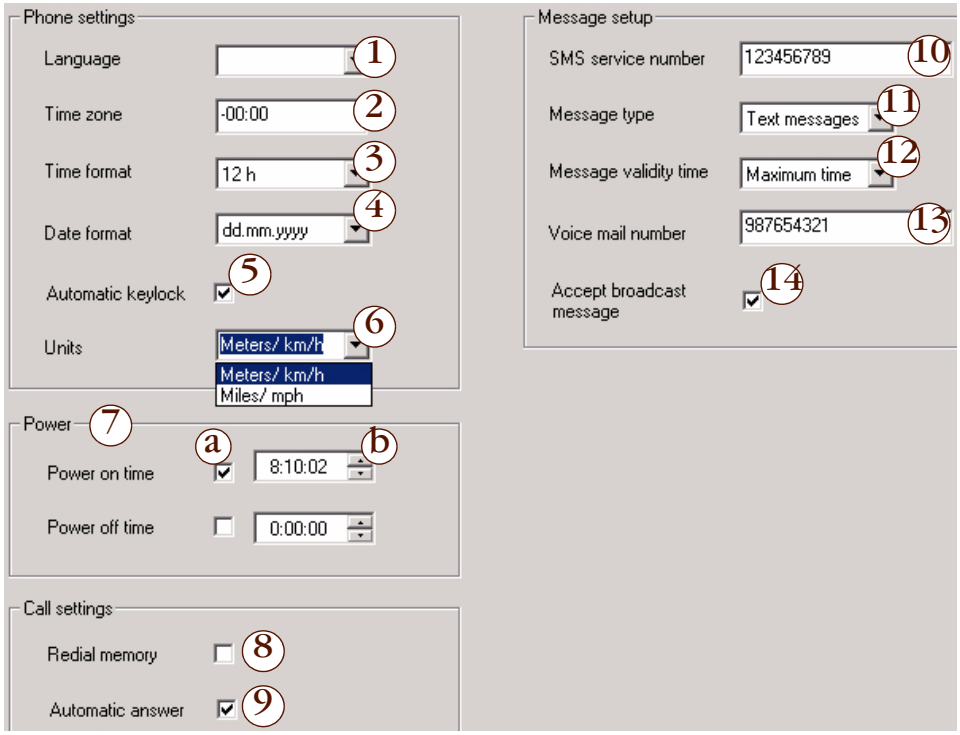
Arranging entries

Arrange the phone book by **Index**, **Name**, or **Number** (3) either by

- clicking the title
- choosing the option from the **Edit** menu
- clicking the mouse´s right button.

- **View by**: This option rearranges the phone book temporarily. When transferring the phone book data back to the phone, the data will be arranged by the old order.
- **Sort by**: This option rearranges the phone book permanently. When transferring the phone book data back to the phone, the data will be arranged by the new order.

USER SETTINGS



Phone settings

LANGUAGE

You can select the menu language, the phone uses. Click the arrow and highlight the desired option (1).

DATE AND TIME SETTINGS

The time information determined here is used together with call logging, incoming messages as well as alarm clock and timers.

When setting the date and time initially, the GPS needs to be turned on and the position needs to be read from a satellite.

Time zone

You can select the local time, your country uses. The default time comes to your phone from a satellite and it is called the standard Coordinated Universal Time (UTC), i.e. "the Greenwich Time".

The standard time zone (UTC) shows here 00:00 and you may need to correct it to match your local time zone (2).

For example, the common time zone in Central and Southern Europe and Scandinavia is +1:00. In Eastern Europe, Finland and Greece the common time zone is +2:00. Key in your local time zone shift with numeric keys.

If the daylight-saving time is in use in your country, you need to change the time zone manually each time, when shifting from winter time to summer time and vice versa. E.g. in Finland time zone in winter is +2:00 but time zone in summer is +3:00.

NOTE: Adjusting time zone only affects the time shown in the phone display. The time accompanying MPTP messages is always in UTC format.

Time format

You can determine whether the time will be displayed as 24 hours or as 12 hours am/pm.

Click the arrow and highlight the desired option (3).

Date format

By selecting **Date and time,** you can determine in which order the time, date and year are displayed. Click the arrow and highlight the desired option (4).

- **dd.mm.yyyy**
- **mm.dd.yyyy**
- **yyyy.mm.dd**

AUTOMATIC KEYLOCK

The keypad lock is used to prevent accidental key strokes.

If the automatic keylock is turned on (5), the keypad will be locked automatically if no key has been pressed for a few seconds.

- To turn the automatic keylock on, check the box.
- To turn the automatic keylock off, leave the check box blank.

UNITS

You can select which one of the measurement systems you want to use to display distances: A metric system or miles per hour.

Click the arrow and highlight the desired option (6).

The unit is used in route navigation.

Settings for power on and power off timers

When the **Power on** timer is activated, the phone turns itself on every day at the same time.

When the **Power off** timer is activated, the phone turns itself off every day at the same time.

1. To activate the timer, check the box right next to it (7a).
2. Select the power on/off time by clicking the digits you want to change (hours/minutes/seconds). As they are highlighted, click the arrows or key in the desired numbers (7b).

Call settings

REDIAL MEMORY

If redial memory is turned on, the last dialled numbers are stored in memory.

Redial memory can be turned on by checking the box (8).

AUTOMATIC ANSWER

The automatic answer function can be turned on or off (9).

If the **Automatic answer** is turned on (the box is checked), all incoming calls are answered automatically when the phone is connected to a car kit or portable hands free kit.

Message setup

SMS SERVICE NUMBER

You can store the SMS service number, which is needed for sending normal short messages and telematics protocol messages (10).

The number must be set correctly, otherwise sending short messages is not possible.

The SMS service number can be found e.g. in the manual of your local network operator.

However, if you are supplied with a separate SMS service number for telematics protocol messages, you may store the number in the **Telematic settings > Protocol settings** data field. For more information, see TELEMATICS: TELEMATIC SETTINGS ON PAGE 28.

MESSAGE TYPE

You can determine what kind of a message you are processing. You can choose the message type from these: **Text**, **Fax**, **X400**, **Email**, **Ermes**, or **Data**.

When using the phone for normal or MPTP messaging, click the arrow and highlight **Text** for message type (11).

MESSAGE VALIDITY TIME

You can select the length of validity for *normal SMS messages*, i.e. for how long the SMS messages are stored in the server of the operator.

You can choose the message validity from these: **1 hour**, **6 hours**, **24 hours**, **1 week** or **Maximum time**.

Click the arrow and highlight the desired option (12).

NOTE: The length of validity for *telematics protocol messages* is selected in **Telematic settings > Protocol settings** data field. For more information, see **TELEMATICS: TELEMATIC SETTINGS ON PAGE 28**.

VOICE MAIL NUMBER

Voice mail service is a network service. If you have subscribed the service, you need to store the voice mail number to be able to listen to the voice messages left for you.

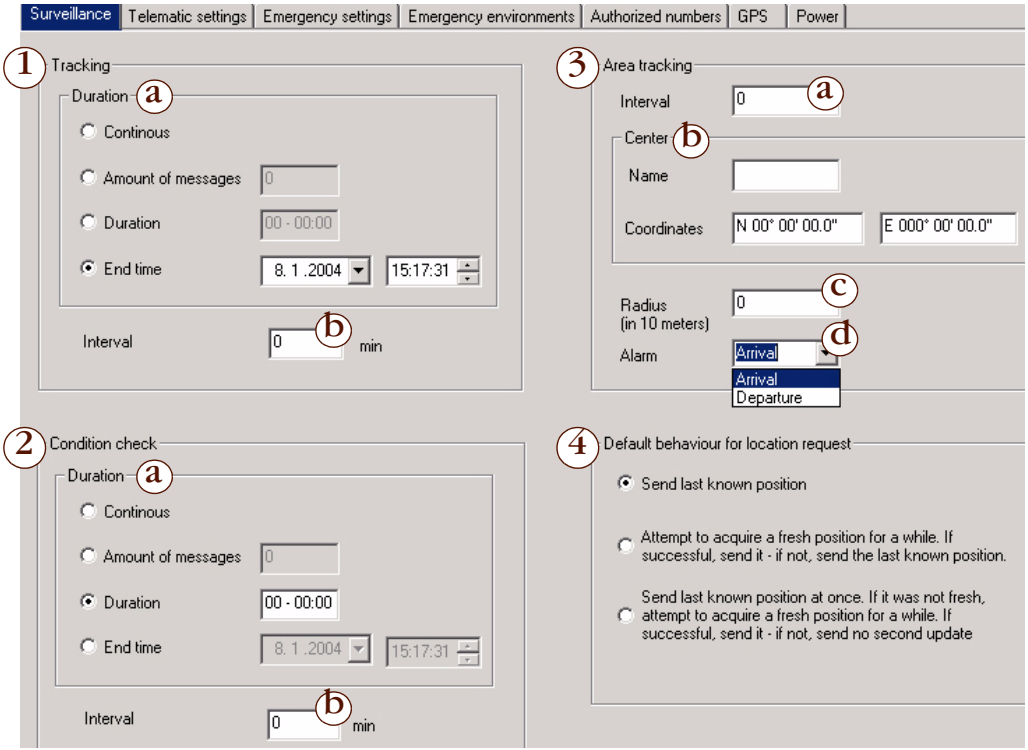
Key in the voice mail number (13), which is supplied to you by the service provider.

Broadcast message setup

Cell broadcasts are general messages, which are broadcast to all receivers within a particular region. They may contain advertisements, local weather reports and information about road traffic, stock exchange and sport results. Cell broadcast service is a network feature.

To accept broadcast messages, check the box (14).

TELEMATICS: SURVEILLANCE



About telematics

Telematics is a kind of electric data transfer technique, which can also be used in wireless phone networks. Nowadays, telematics offers several new services and applications, such as GPS-positioning (which can be used e.g. in rescue operations) and different remote-controlled devices (which can be used e.g. in medical equipment and emergency and service centers).

All telematics functions require activation by the service center: Activation is completed only after the service center sends an acknowledgement message to the phone.

In some cases telematic functions are entirely remotely configured and controlled (by the service center), while in some cases tracking, area tracking and condition check settings and initial activation/deactivation can be done from the phone´s own menu (by the end-user), as well.

All trackings cannot be turned on at the same time. For detailed information, please check the MPTP document.

Please note that if the phone is temporarily switched off or the battery is removed, the tracking record (e.g. amount of messages) will be reset and start from the beginning.

Make sure that required telematics settings are done and essential phone numbers, such as **Service center number** and **SMS service number**, are stored properly in the phone. NOTE: Some functions and settings can be secured by a security code. If the code is requested for accessing some functions, you must key in the code, first. For more, see SECURITY CODE FOR TELEMATICS AND GPS ON PAGE 57.

Tracking

When the tracking function is turned on, the position information is sent to the service center several times in sequence.

DURATION

You can select, for how long or on what terms tracking will be on (1a). After that, the tracking will be turned off automatically. Click the arrow and highlight the desired option.

- **Continuous**: The tracking will be turned on until further notice. !Deactivation message must be sent separately.
- **Amount of sent messages**: Tracking will be on until defined amount of messages has been sent to the service center. Key in the amount and confirm your choice.
- **Duration**: Tracking will be on for a period of time. Key in how many days, hours and minutes, the tracking should be on.
- **End time**: Tracking will be on until the end time is reached. Key in the date and time, the tracking should be turned off. Date and time can be selected by clicking the arrows, as well.

INTERVAL

The given interval, e.g. 60 minutes, indicates that the phone will send its position to the service center at intervals of 60 minutes.

Key in the tracking interval in minutes (1b).

ACTIVATION

Make sure all the required settings for tracking are completed before activating the function. Such settings are, e.g. duration and interval. New settings can be applied only while the tracking is deactivated.

In some phone models, e.g. in Track, tracking can be initially activated or deactivated from the phone menu. In this case, activation is completed only after the service center sends an acknowledgement message to the phone.

In some phone models tracking activation or deactivation cannot be initiated from the phone menu at all. In this case tracking is always activated or deactivated by sending an MPTP message to the phone from the service center.

Condition check

Condition check is a kind of timer, which provides periodic check of your activity. If you do not respond to a check request by the way you are supposed to respond to it, the service center will be informed of your missing or incorrect response.

DURATION

You can select, for how long or on what terms the condition check timer is turned on (2a). After that, the timer will be turned off automatically. Click the arrow and highlight the desired option.

- **Continuous**: The condition check timer will be turned on until further notice. !Deactivation message must be sent separately.
- **Amount of messages** (notifications): The timer will be on until you have confirmed a certain amount of messages (notifications). The confirmation notifications are sent to you by the phone, not by the service center. Key in the amount of messages.
- **Duration**: The timer will be on for a period of time. Key in how many days, hours and minutes the timer should be on.
- **End time**: The timer will be on until the end time is reached. Key in the date and time the timer should be turned off. Date and time can be selected by clicking the arrows, as well.

INTERVAL

The given interval, e.g. 60 minutes, indicates that the phone will send you confirmation notifications at intervals of 60 minutes.

Key in the interval in minutes (2b).

Area tracking

When the area tracking is turned on, the position information will be sent to the service center only when the phone is moving in or out of the pre-defined area.

The area can be determined by keying in a center point and a radius of an area. The area tracking does not contain duration option, i.e. the area tracking will never be turned off automatically.

INTERVAL

The given interval, e.g. 60 minutes, indicates that the phone will send its position to the service center at intervals of 60 minutes, but only in case the phone is located outside of the determined area.

Key in the interval for area tracking in minutes (3a).

CENTER POINT

Key in the center point name (e.g. Home) and enter coordinates (3b).

RADIUS

Key in the desired radius in 10 meters (3c). E.g. by entering 20, your actual radius will be 200 meters.

ALARM MODE

You can set an alarm to alert when crossing the borderline of an area. The alarm can be set to alert either when arriving in or departing from the particular area (3d).

Click the arrow and highlight the desired option.

ACTIVATION

Make sure all the required settings for area tracking are completed before activating the function. Such settings are, e.g. center point, radius, alarm mode and interval. New settings can be applied only while the area tracking is deactivated.

In some phone models, e.g. in Track, area tracking can be activated or deactivated from the phone menu. In this case activation is completed only after the service center sends an acknowledgement message to the phone.

In some phone models area tracking activation or deactivation cannot be initiated from the phone menu at all. In this case area tracking is activated or deactivated by sending an MPTP message to the phone from the service center.

Default behaviour for location request

The phone may receive several different messages requesting location. Such messages can be, e.g. Location request (?LOC) messages, Location history request (?HIS) messages. (For more information on how to create location request messages, see the separate MPTP document.)

You can define, which way the phone responds the location requests (4).

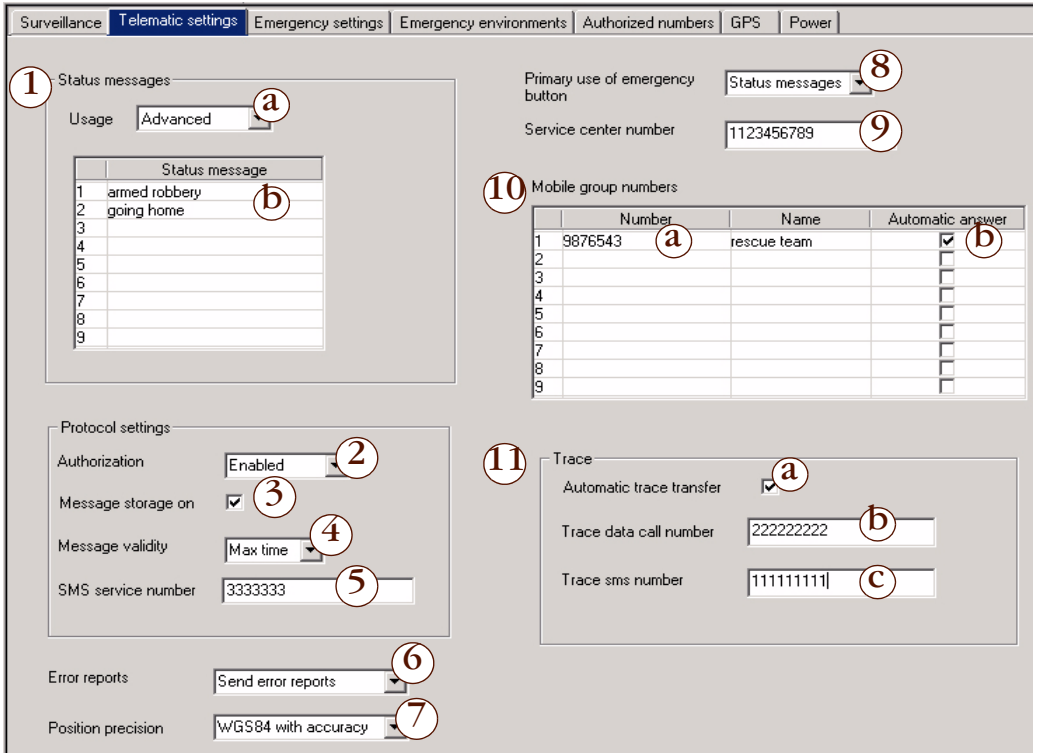
The message always includes a time stamp indicating age of the position.

Choose from the options below by checking the corresponding box in the Benefon Configurator.

- **Send last known position**: When the phone receives the location request, the phone immediately recalls the latest position found in the memory and sends it to the requesting number. The position can be quite old. If the phone does not have a position at all, the message will be sent without position.
- **Attempt to acquire a fresh position for a while**: When the phone receives the location request, the phone immediately switches the GPS on (if it is currently off), updates position, sends it and switches the GPS off. Then the phone returns to normal idle mode. Only in case the position update is NOT possible within 3-4 minutes, the phone will send the latest position found in the memory to the requesting number.
- **Send last known position at once**: When the phone receives the location request, the phone immediately recalls the latest position found in the memory and sends it to the requesting number. In addition to that, the phone tries to update the position for 3-4 minutes. If the position update succeeds, the new position is sent to the requesting number, as well.

Phone also checks if an AGPS can be retrieved and requests it automatically to speed up calculation. Using the AGPS requires that the parameters for the AGPS are configured in the phone. For more information on AGPS settings, see ASSISTED GPS ON PAGE 48.

TELEMATICS: TELEMATIC SETTINGS



Status messages

You can specify usage for status messages (1a) and view, edit and create them (1b).

USAGE

- In **Simple** usage, only status messages numbered 1 - 9 can contain text. Additionally, numeric status messages are possible.
- **Advanced** usage works otherwise the same way as the simple usage, but additionally you can enclose some unique information for each status message when sending it. With the extra note you can, e.g. specify the location, you are in. Extra information can be added to numeric messages (msg numbers 10 - 999), as well.

STATUS MESSAGE LIST

You can write fixed text for the status messages numbered 1 - 9. The text will always be shown when sending the particular status message, despite of the chosen **Usage**.

Protocol settings

AUTHORIZATION

The phone is allowed to respond to protocol messages sent from the *authorized* numbers automatically at any time. Always authorized numbers are:

- The numbers stored as **Authorized numbers**
- The numbers stored as **Emergency center** numbers
- The number stored as the **Service center** number.

Authorization on - the setting is enabled (2)

- If authorization is turned on, all requests coming from authorized numbers are automatically processed. Any responses are sent to the number from which the request came.
- All requests coming from unauthorized numbers are discarded.

Authorization off - the setting is disabled

- If authorization is turned off, all requests are automatically processed.
- If the service center number is defined, any responses are always sent to that number.

- If the service center number is NOT defined, responses are sent to the number from which the request came.

MPTP MESSAGE STORAGE

If sending of an MPTP message fails, the phone will send the message later, assuming the MPTP protocol message storage is turned on and there is space left to deposit the message. Use of the MPTP protocol message storage must be configured in the phone.

By checking the box (3) you select that the telematics protocol messages are put into storage, if there is no service at the moment. The storage capacity is 100 messages. After the phone is in service again, these messages are automatically sent forward shortly after.

MESSAGE VALIDITY

You can select the length of validity for *telematics protocol messages*, i.e. for how long the SMS messages are stored in the server of the operator (4). (The length of validity for normal SMS messages is selected elsewhere, in the **User settings**).

This setting can be used to avoid massive helping efforts in case an emergency message has been sent a week ago and there is a reason to believe that help is no longer needed.

You can choose the message validity from these: **1 hour, 6 hours, 24 hours, 1 week** or **Maximum time**.

SMS SERVICE NUMBER

You can set separate SMS service number for the telematics protocol messages (5). If the number is not set, the normal short message service number (in the **User settings**) is used instead. Key in the number and confirm it.

Error reports

You can set the phone to inform of errors occurred in MPTP messaging (6). An error can be, e.g.

- Failure in message transmission: E.g. the phone is unable to transfer trace log
- Misspelling: The phone detects that a command string is uncorrect
- Errors in logic (illegal actions): You try to turn a function on when, in fact, the function is already turned on.

Depending on current authorization setting, the phone will send error reports to the **Service center number**, some other authorized number or requesting number. For more information, see AUTHORIZATION ON PAGE 29 and SERVICE CENTER NUMBER ON PAGE 32 and TELEMATICS: AUTHORIZED NUMBERS ON PAGE 44.

NOTE: If sending of **Trace log** fails, the phone will inform of failure only under these circumstances:

- The **Trace sms number** is stored and
- **Error reports** data field shows **Send error reports**.

For more information, see TRACE LOG SETTINGS ON PAGE 33.

Position precision

You can set the device to show precision of the coordinate calculation in protocol messages.

Precision of coordinates will be shown in meters until precision exceeds 254 meters. This setting has an effect on almost all protocol messages, which contain position information, excluding emergency messages.

Click the arrow and highlight the desired option (7).

Primary use of emergency button

You can select the primary use of the BeneGuard button, i.e. emergency (SOS) button (8). Click the arrow and highlight the desired option.

- For emergency (SOS) calls/messages
  - You can **only make emergency calls and send emergency messages**, status messages cannot be sent and mobile group calls cannot be made.
- For status messages
  - You can **make emergency calls, send emergency messages and send status messages**. In this case emergency calls/messages will always be started by pressing the emergency button for a few seconds and status messages will always be sent by pressing the emergency button quickly - despite of the selected SOS activation.
- For mobile group calls.
  - You can **make emergency calls, send emergency messages and make mobile group calls**. In this case emergency calls/messages will always be started by pressing the emergency button for a few seconds and mobile group calls will always be made by pressing the emergency button quickly - despite the selected SOS activation.

The emergency button can have two functions. One function is always making emergency calls/messages. Another function is selectable: None, mobile group calls, or status messages. NOTE: In order to send status messages *and* make mobile group calls, you need to switch the setting each time to correspond the desired function.

Service center number

You can change and store the phone number, which is used for sending telematics protocol messages to the service center.

Key in the number of the service center (9).

Mobile group numbers

You can view, edit, and store new mobile group numbers. All members joined in the same group will call the same number.

You can form several mobile groups. (However, if the service center sends mobile group numbers to your phone as a protocol message, numbers stored in here will be lost.)

Key in a mobile group number or edit an old number (10a). You can also store a name here but it is not required. You can also attach the automatic answer function to the number by checking the box (10b).

Trace log

TRACE LOG SETTINGS

The phone stores position data in the phone memory automatically. Stored data contains position information and time stamp.

The maximum storage capacity is 1000 positions. Once the log is full, the phone stacks the information by dropping off irrelevant positions. When positions cannot be dropped any more without losing important information, there are two ways to proceed:

- Log overwrite: In case the log is not transferred at all, the phone will automatically replace the oldest positions with the new ones.
- Log transfer: There are several ways to transfer the log from the phone:
  - Locally, by using the Benefon Configurator and data cable, or
  - Remotely, "over the air" by sending a specific MPTP message separately to the phone, or
  - By using **Automatic trace transfer.** In this case the setting is done in advance, via the Benefon Configurator, but the actual transfer will happen automatically and remotely.

Automatic trace transfer

By checking the box (11a), the trace log will be sent automatically once the log is stacked full. The destination number to which the log will be sent is the trace data call number.

By leaving the check box blank, trace log is automatically overwritten once the log is full. In this case the log can be recalled only by sending a specific MPTP message to the phone.

Trace data call number

Key in the trace data call number (11b). This number is needed for transferring log remotely from the mobile phone. The receiving unit must include a phone, modem and computer.

When the receiving phone is a normal phone, you can store its normal phone number for the trace data call number.

NOTE: If the receiving phone is a mobile phone, it must contain a specific SIM card, which is equipped with data feature. Data feature usually includes a separate data call phone number (i.e. CSD number) for data reception. In order to get this feature, please contact your network operator.

SMS number

Key in the SMS number (11c). The number is needed for informing the recipient in case the data transfer fails after three attempts. Depending on the authorization setting, receiving party can be service center, some other authorized number, or any number.

Also make sure that **Error reports** is set to **Send error reports**. For more information, see ERROR REPORTS ON PAGE 31.

TRANSFERRING TRACE LOG

Local transfer

When the phone returns home, it is connected to the Benefon Configurator by BW cable. The log will be loaded from the phone to the software the same way as other settings. For more information, see CONNECTING THE PHONE TO THE BENEFON CONFIGURATOR SOFTWARE ON PAGE 9 and LOADING SETTINGS FROM THE PHONE TO THE SOFTWARE ON PAGE 10.

When the Benefon Configurator loads the log directly from the phone, the trace log file appears automatically in the display in readable text format. The **Trace log** icon is shown under the **My Benefon** node on the left, and by clicking the icon the actual trace log file will be shown in the Document window on the right.

Remote transfer

The phone sends the log to the service center remotely, as a trace data call, using Z-modem protocol.

Normal speed for data transfer in the GSM-network is 9600 baud. Since the Benefon phones support higher speed, the transfer can be sped up to 14400 baud, in case the higher speed is supported by the network and SIM card, as well. Speed configuration for the GSM network can be done by specific MPTP message.

The computer must contain a modem application which supports Z-modem protocol (e.g. Windows Hyperterminal). NOTE: Check the modem settings. Serial port must be correct, and transfer speed must be set according to receiving phone. E.g. when using the Benefon mobile phone as the receiving phone, transfer speed must be set to 19200 bits/second.

During the transfer, the receiving mobile phone must be connected to the computer by a data cable/BW cable.

In order to make the modem answer automatically incoming data calls, key in the command ats0=1 and press Enter on the keyboard. The command is associated with the receiving mobile phone. (the automatic answer for data calls can be turned off by keying in the command ats0=0)

The incoming log file will be found in your computer. Default destination directory depends on modem settings and can be changed. In most cases the log file can be located at the root directory of the modem application.

The binary-coded log file name contains U (or some other) letter and the phone´s serial number. The log file identifier is **.bin.**

Sample case by using Windows Hyperterminal:

STEP1: CONFIGURING MODEM APPLICATION FOR DATA RECEPTION

1. Connect the receiving mobile phone to the computer by data cable and open the **Windows Hyperterminal** modem application.
2. Open **New connection** (from the **File** menu if the dialog box is not displayed).
3. **Name** the connection -> **Ok**.
4. Select **port** for the connection (e.g. COM1) -> **Ok**.
5. Set transfer speed to **19200 Bits/Second** ->**Ok**.
6. Open **Receive file..** from the **Transfer** menu.
7. Click **Browse** and find the desired destination directory ->**Ok**.
8. Select **Z-modem** for **Receiving protocol** ->**Receive**.

When the modem configuration is done, you may save the file by clicking **Save as...** from the **File** menu.

Close the connection by clicking **Disconnect** from the **Call** menu.

From now on, whenever you need this connection, you can use the profile just created by selecting **Open...** from the **File** menu.

STEP2: RECEIVING REMOTELY SENT LOG FILE

Connect the receiving phone to the computer by data cable/BWcable and open the **Windows Hyperterminal** modem application.

To ensure the connection between mobile phone and the modem, you may key in **ATI** on the screen and press Enter -> the modem will identify receiving mobile phone.

Key in **ats0=1** and press Enter -> the mobile phone will answer automatically to incoming CSD calls.

When the mobile phone starts alerting, the modem will display **RING**. When the mobile phone answers, the data transfer dialog box appears on the screen. When the transfer is finished, the dialog box disappears and the connection can be switched off.

If you do not use the automatic answer, do as follows (when the phone starts alerting): Press the Hook-up key on the phone keypad OR key in **ATA** on the screen and press Enter.

NOTES:

The Trace settings (Trace data call number, trace sms number, Error reports and the automatic trace transfer), as well as Service center number must be configured in the phone in advance. For more information, see SERVICE CENTER NUMBER ON PAGE 32 and TRACE LOG SETTINGS ON PAGE 33, and ERROR REPORTS ON PAGE 31.

Automatic answer setting of the receiving mobile phone is for voice calls, not data calls and thus it must be turned off.

OPENING AND PROCESSING REMOTELY SENT LOG FILE (IN THE BENEFON CONFIGURATOR)

Start the Benefon Configurator and open the trace log file as follows:

1. Highlight the **Trace log** icon shown on the left side of the screen, under **My Computer** node.
2. Choose **Open** from the **File** menu (or, click the mouse´s *right* button and highlight **Open**).
3. Click the **Files of type** setting and highlight **All Benefon Configurator files**.
4. Browse the directories and files until the destination directory and file is found. The file identifier is **.bin**. Click **Open**.

Trace log file is originally in binary-coded format. As the file is opened in Benefon Configurator, the software generates the file and displays it as a table in a readable text format.

If you want open and process these **.bin** files in some customized application other than Benefon Configurator, please ask directions from the Benefon Partner.

Saving the log file

To save the trace log in Benefon Configurator, choose **Save** or **Save as..** from the **File** menu. The trace log file will be saved in readable text format (.log).

Deleting the log file

To delete the trace log in Benefon Configurator, choose **Delete trace log** from **Mobile** menu.

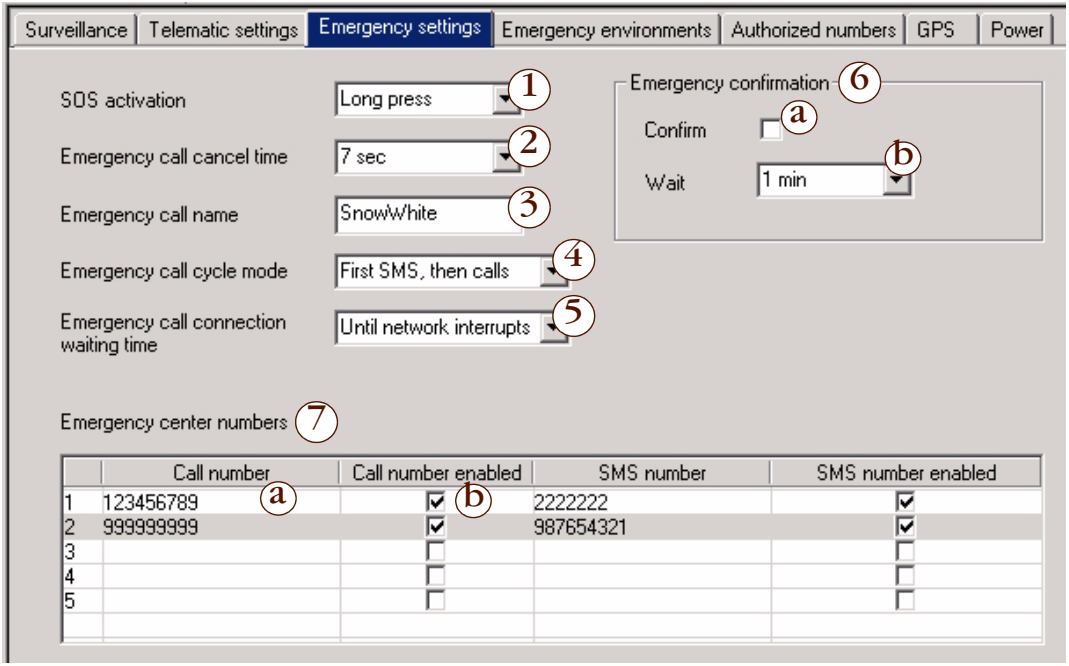
NOTE: If you delete trace log from **My Benefon** node, the log is lost once and for all. So, make sure the log is stored in some place else in case you need to recall the log information afterwards.

PROCESSING TRACE LOG BY USING SOME OTHER APPLICATION

Trace log files cannot be edited in Benefon Configurator. In order to modify or print the log file, do as follows:

1. First save the log in Benefon Configurator. The log file identifier will become **.log**.
2. Open Windows Excel or Notepad. Make sure, the Files of type shows **All files**.
3. Open the log file in the chosen application.

TELEMATICS: EMERGENCY SETTINGS



Basic emergency settings

SOS ACTIVATION

If the emergency button is used for emergency (SOS) calls/messages only, you can determine the way the emergency call/message will be started (1):

- by pressing and holding down the emergency button for a few seconds once or
- by pressing the button quickly **twice** (in 5 sec.).

Click the arrow and highlight the desired option. NOTE: This option is adjustable only if you have determined **SOS call** for **Primary use of emergency button** in the Telematic settings.

EMERGENCY CANCEL TIME

After pressing the emergency (SOS) button in order to start an emergency call, the voice call and the short message can still be cancelled.

You can determine the time (in seconds), the cancellation needs to be done. This function is a kind of delay: A message will not be sent or a call will not be made if it is cancelled in the pre-defined time.

Click the arrow and select the desired option for the time of delay (2).

When cancelling the emergency call or message, press the Hook-up key during the time of delay (e.g. in 7 seconds).

NOTE: If the cancelling time is set to zero, there is no possibility to cancel the entire emergency cycle.

NAMING EMERGENCY CALL

You can name the emergency call as you like (3). This is the way to mask the real phone number to which you are calling.

The "nickname" will be displayed during the Bene-Guard emergency call.

SELECTING EMERGENCY CALL CYCLE MODE

You can define order for making emergency (voice) calls and sending emergency messages while the emergency cycle is on. Click the arrow and highlight the desired option (4).

You have two choices:

- **First SMS, then calls**: When the emergency cycle is initiated, first the phone will send the emergency messages, after which the voice calls will be made starting from the top of the list of the emergency numbers.
- **Alternately**: The phone will make a voice call and send an SMS in pairs according to the list order, starting from the top.

SETTING EMERGENCY CALL CONNECTION WAITING TIME

You can define for how long a time the phone tries to call a single emergency number before moving on to the next number in the list of emergency numbers.

Click the arrow and highlight the desired option (5).

SETTING EMERGENCY CONFIRMATION FOR EMERGENCY MESSAGE DELIVERY

By checking the **Confirm** box (6a), you can request *a confirmation* just to make sure that someone has received an emergency message. The phone will resend emergency messages until it receives a confirmation of the successful delivery.

You can also specify *the waiting time* (6b), i.e. how long a time the phone waits for the confirmation before trying to reach some other emergency center number.

NOTE: This feature is not supported by all control systems. Using this feature in a system, which does not support it can cause massive resending of messages and high charges.

EMERGENCY CENTER NUMBERS

The emergency (SOS) messages are sent and emergency calls are made to the numbers stored in the emergency center list.

The numbers are in priority order, starting from the top of the list. These numbers work as "a chain".

You can have two numbers (a phone number and an SMS number) associated with each emergency center number (7a).

Check the box to make sure, the corresponding number is used during an emergency cycle (7b).

Making emergency cycle

Emergency cycle means making specific emergency call to emergency center numbers. During the emergency cycle emergency environment settings (e.g. tone and display settings) are automatically switched on until the cycle is over. For more information, see CONFIGURING EMERGENCY ENVIRONMENTS ON PAGE 43.

Depending on configuration, the emergency call can contain both (voice) calls and messages. Calls can be made to mobile phone numbers, or normal phone numbers. Messages are protocol messages sent to mobile phones via SMS. The emergency message contains both GPS coordinates and GSM network measurement report.

The emergency numbers are in priority order, starting from the top of the list. These numbers work automatically, as "a chain", through the list. If the first number is unreachable (after two attempts), the phone calls or sends the report to the second number. If it is not answered either, the phone will go on to the third number on the list and so on.

The phone tries to reach contact with the other numbers **once** before moving on to the next number on the list. If there is still no answer after going through the whole list, the calling procedure will be started all over. The phone will make three call rounds at maximum.

Emergency cycle is started by pressing the BeneGuard button  , located on the top of the phone. The button must be pressed the way it has been configured: A long press or two quick presses. For more information, see SOS ACTIVATION ON PAGE 38.

The emergency cycle is over when the calls are made and messages are sent (if the cycle is not interrupted, or cancelled), and the phone returns to normal operation.

In order to be able to cancel the emergency cycle, the cancel time must be configured in the phone. For more information, see EMERGENCY CANCEL TIME ON PAGE 38.

CIRCUMSTANCES WHICH MAY AFFECT ON EMERGENCY CYCLE

1. Being in a shadow area of the GSM network at the time of the event.
2. Poor GPS coverage during emergency cycle may cause the emergency cycle completion to slow down.
3. Busy telephone line - applies to a voice call connection.
4. Message transmission error caused by the carrier of an SMS, i.e. the network operator.

MAKING AN EMERGENCY CALL WHICH INCLUDES BOTH CALL NUMBERS AND SMS NUMBERS

1. Press △.
2. The phone sends the message including position information. If current position coordinates are not available, previous coordinates will be sent instead.
3. The phone alerts until the call is answered.
4. A voice call in progress.

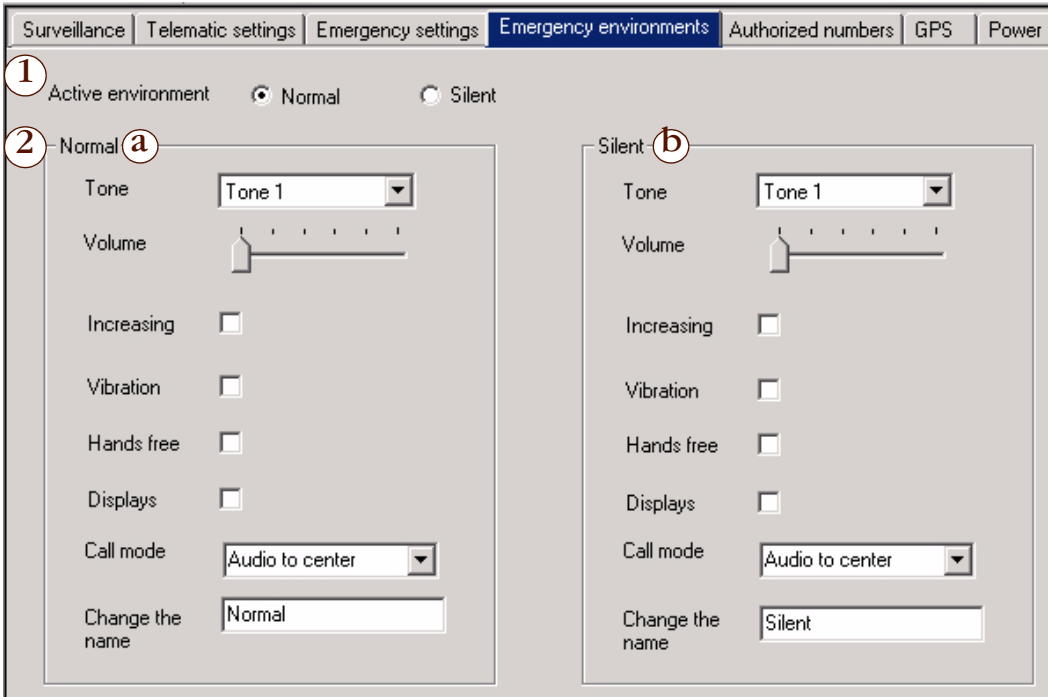
CANCELLING EMERGENCY CYCLE

As a sign of cancellation period, you may hear the cancellation tone. You may also see a timer indicating time left for cancellation.

- To cancel the entire emergency cycle, press the key briefly during the cancellation period.
- When the emergency cycle has already started, it cannot be cancelled entirely, but the rest of the emergency calls and messages can be cancelled. In order to do so, press the key and hold it down for five (5) seconds.

When the cancellation is succeeded, the phone will return to normal operation.

TELEMATICS: EMERGENCY ENVIRONMENTS



About emergency environments

You can determine specific sound and display settings which will be on during an emergency call.

The phone switches the emergency environment on automatically when the BeneGuard button is pressed.

The phone switches back to the normal environment automatically when the emergency cycle is succesfully put through, or if the emergency cycle is cancelled correctly during the cancellation period.

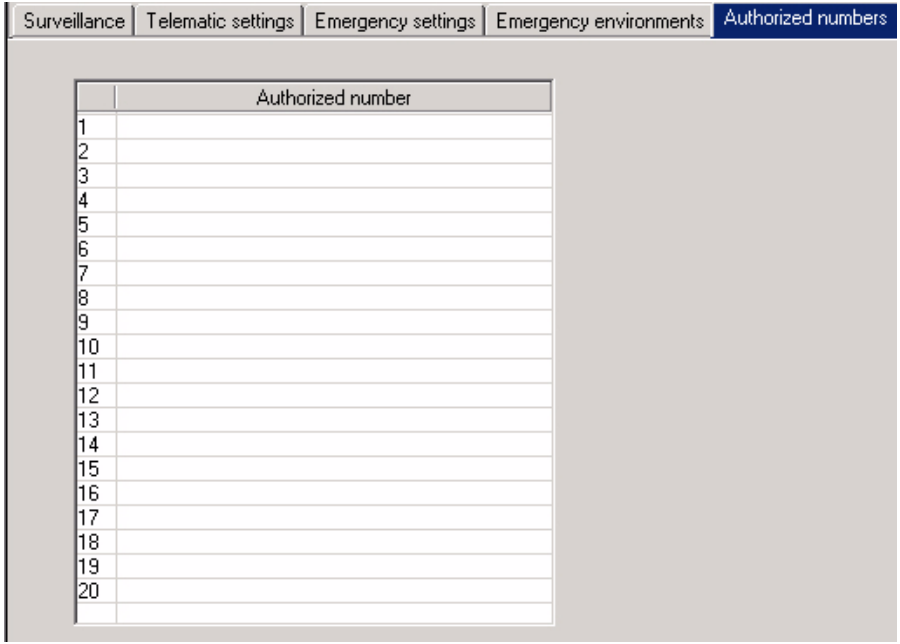
You can configure two separate profiles for emergency situations: Normal (2a) and Silent (2b).

You can activate the desired profile by checking either one of the boxes **Normal** or **Silent** for **Active environment** (1).

Configuring emergency environments

- **Tone**: To select the desired melody for alert tone, click the arrow and highlighting the desired option.
- **Volume**: To increase the volume, drag the tab rightwards - to decrease the volume, drag the tab leftwards.
- **Increasing**: To make the alert tone increasing, check the box.
- **Vibration**: To attach vibration to the alert, check the box.
- **Hands free**: To enable hands free operation, check the box.
- **Displays**: To make the phone to display the emergency cycle notifications, check the box.
- **Call mode**: To select the call mode, click the arrow and highlight the desired option: Audio both ways or Audio to center.
- **Change the name**: To change the name of a profile, key in a new name.

TELEMATICS: AUTHORIZED NUMBERS

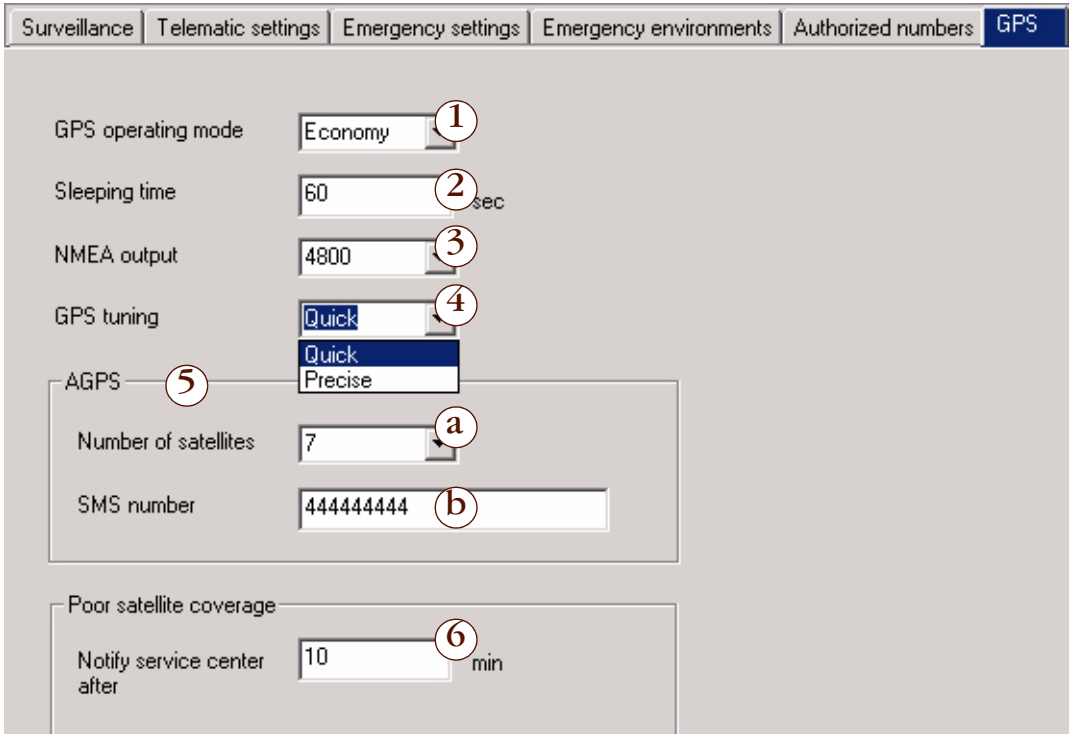


The phone is allowed to respond to protocol messages coming from the *authorized* numbers automatically, at any time. Always authorized numbers are:

- The numbers stored as **Authorized numbers**.
- The numbers stored as **Emergency center numbers**.
- The number stored as the **Service center number**.

For turning the authorization on or off, see **AUTHORIZATION ON PAGE 29**.

TELEMATICS: GPS



Setting GPS operating mode

The GPS receiver in the phone uses power saving options for ensuring maximum battery capacity.

Click the arrow and highlight the desired option (1).

The GPS receiver has three modes:

- **Off**
- **Economy** with the power saving option
  - the time needed for position fix depends on present circumstances. If the GPS unsucceeds in calculating the position, it will fall asleep for a while and retry to calculate the position later on
- **Full power** without the power saving option.

Operating mode depends on the way, the phone is used. Autonomous system, i.e. a portable mobile phone, normally uses either **Economy** or **Off** mode, while a phone connected to constant power supply, e.g. a car kit, uses **Full Power** mode.

GPS sleeping time (in economy mode)

As a default setting, the GPS economy mode calculates position approximately every 45 seconds. The position interval consists of two things:

- An ideal *sleeping time* for the GPS and
- An actual *time* needed *for searching satellites and calculating position* by the GPS.

The sleeping time is adjustable (2). In the Benefon Configurator, key in the sleeping time in seconds. The sleeping time should be rounded to tens, otherwise the software does the rounding.

E.g. by entering 27, the ideal sleeping time will be rounded to 30 seconds. Note that 20 seconds is the minimum value.

NOTE: The time needed for searching and calculating satellites depends on present circumstances, e.g. satellite coverage, age of the latest position fix, distance from the previous to the current position and so on.

NMEA output

The NMEA port output can be turned on or off. This phone supports a subset of NMEA 0183 v2.0 output protocol, which is used for transferring position data between the phone and a navigation system, such as a Search and Rescue application.

For the connection you also need a BW cable (an accessory).

Click the arrow and highlight the desired option (3).

- By selecting **Off**, you will turn the NMEA output port off.
- By selecting a transferring speed you will turn the NMEA output port on.

NOTE: When the **NMEA output** is turned on, the phone will consume slightly more power.

GPS tuning

You can set tuning values for the GPS receiver. Depending on selected value, the GPS prioritizes precision over fastness or vice versa.

Set the value by clicking the arrow and highlighting the desired option (4).

- **Quick**: The GPS is tuned for fast position fix. The receiver can acquire position fix quite fast in moderate or good conditions. Position can be acquired even in a bad satellite coverage, but the accuracy might not be so good.
- **Precise**: The GPS is tuned for high accuracy. However, acquiring the position fix might take time and can be problematic in a bad satellite coverage.

The GPS tuning values can also be set from the GPS menu of the phone.

Assisted GPS

The phone has capability to receive assistance to the GPS receiver in order to speed up the initial position calculation. This is very useful feature if the phone is in poor satellite coverage.

Assistance can be supplied over the Mobile Phone Telematics Protocol in a binary coded protocol message. The message will contain ephemeric and almanac data which is based on a rough position calculated by e.g. GSM network parameters (Cell-ID, CI-TA etc). The assisted GPS is supplied from a third party station server.

Using the AGPS does NOT affect the accuracy of the position. If the last position fix is deemed to be too old, and the AGPS is set, the AGPS feature is automatically used to speed up the position determination.

The cost of the AGPS service is determined on the contract of the service provider.

You can specify settings for ordering assisted GPS information from a service provider.

- **Number of satellites:** Select the number of satellites (5a). However, note that the more satellites selected, the faster the service but the higher the charge.
- **SMS number**: Key in the SMS number of the AGPS service (5b).

Poor satellite coverage

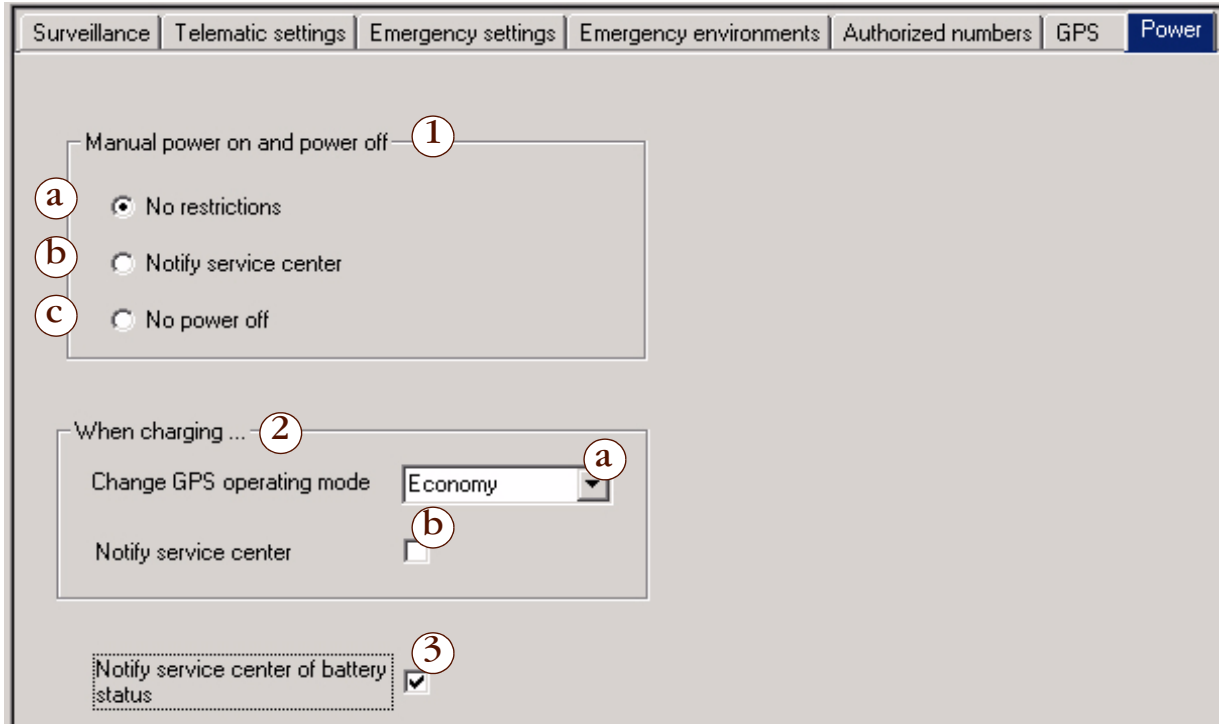
Notify service center when satellite coverage drops: The phone may notify the service center if the satellites are suddenly dropped and position is lost, e.g. when entering in a building.

When the phone loses the satellites, it will send only *one* notification, despite of how long a time it stays in the poor satellite coverage.

Key in the timeout in minutes (6). Note that this option will be activated only after the phone gets the first position after this configuration.

The timeout indicates, for how long the phone is allowed to stay in a poor satellite coverage before sending a protocol message to the service center - the smaller the number you set in here, the faster the phone will react to lost satellites and the sooner the notification will be sent.

TELEMATICS: POWER



Settings for manual power on and off

- **No restrictions** (1a) - The phone can be turned on and off as usual. The service center will NOT be notified of the power on/off.
- **Notify service center** (1b) - The service center will always be notified when the phone is powered on or off. Notifying means sending a protocol message to the service center.
- **No power-off** (1c) - The phone cannot be powered off normally (by pressing ⏻). Moreover, if the phone powers off for some reason (e.g. Low battery), the phone will send a protocol message to the service center.

Settings during battery charging

CHANGE GPS OPERATING MODE

You can select, which one of the GPS power modes is on while the phone is being charged.

Click the arrow and highlight the desired option (2a).

By selecting **No change**, the GPS mode remains in the previously configured operating mode (i.e. its normal operating mode).

Set the GPS **Off** in case

- the time reserved for charging is quite short, or
- GPS functions are not needed during charging process.

NOTIFY SERVICE CENTER WHEN CHARGING

By checking the box (2b), the phone will notify the service center in case the phone is connected to a charger or disconnected from it.

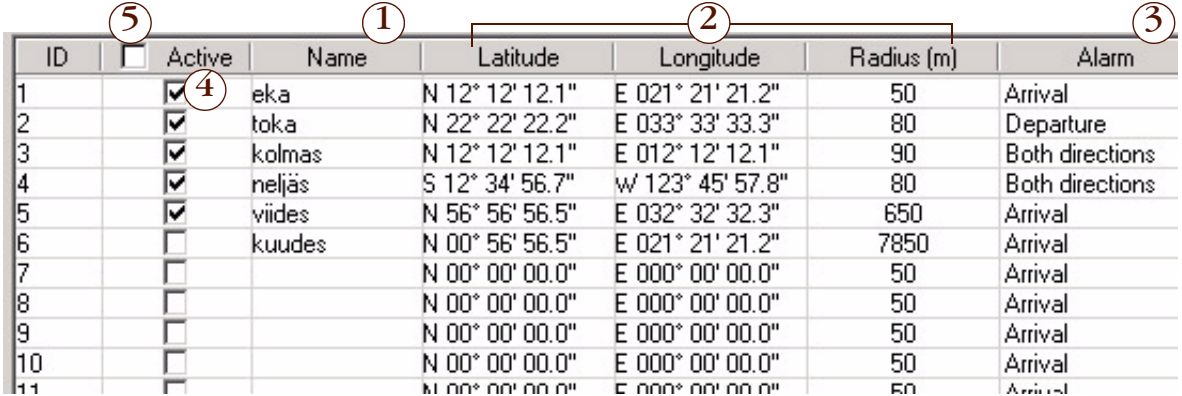
Notifying means sending a protocol message to the service center, including the latest position.

Notify service center of battery status

By checking the box (3), the service center will be notified of some events occurred in battery status.

Notifying means sending a protocol message to the service center, for example in these cases: Low battery, temperature too warm/too cold for charging or using battery, battery failure.

WAYPOINT TRACKING



ID	Active	Name	Latitude	Longitude	Radius (m)	Alarm
1	☑	eka	N 12° 12' 12.1"	E 021° 21' 21.2"	50	Arrival
2	☑	toka	N 22° 22' 22.2"	E 033° 33' 33.3"	80	Departure
3	☑	kolmas	N 12° 12' 12.1"	E 012° 12' 12.1"	90	Both directions
4	☑	neljäs	S 12° 34' 56.7"	W 123° 45' 57.8"	80	Both directions
5	☑	viides	N 56° 56' 56.5"	E 032° 32' 32.3"	650	Arrival
6	☐	kuudes	N 00° 56' 56.5"	E 021° 21' 21.2"	7850	Arrival
7	☐		N 00° 00' 00.0"	E 000° 00' 00.0"	50	Arrival
8	☐		N 00° 00' 00.0"	E 000° 00' 00.0"	50	Arrival
9	☐		N 00° 00' 00.0"	E 000° 00' 00.0"	50	Arrival
10	☐		N 00° 00' 00.0"	E 000° 00' 00.0"	50	Arrival

Waypoint tracking is remotely controlled by the service center. Authorized numbers can control waypoints they have created while the service center can control all waypoints. When the waypoint tracking is turned on, the alarm (incl. position information) will be sent to the service center when the phone is moving out from or in to the pre-defined area. The phone can also be configured to send the position information to the service center whenever crossing the borderline - despite of the moving direction.

NOTE: When entering into the pre-defined area, the alarm will be sent when crossing radius. When entering out from the pre-defined area, the alarm will be sent when crossing radius plus perimeter of 100 meters.

Creating waypoints

- **Name** (1): You may key in the desired name for a waypoint. You can define up to 30 separate, circular areas: The areas are separated from each other by an ID number and a name.
- **Center point coordinates** (2): The waypoint area is defined by keying in **Latitude** and **Longitude** and a **Radius** of an area in meters. The radius should be rounded to tens, otherwise the software does the rounding. E.g. by entering 67, the actual radius will be rounded to 70 meters. 50 meters is the minimum value.
- **Alarm** (3): After activating a waypoint, you can select an alarm option for this waypoint. You have three options: Alarm will be turned on when arriving to a waypoint, departing from a waypoint, or whenever crossing the borderline (both directions). Each waypoint can have alarm option of its own.
- **Activation of a waypoint** (4): To activate a waypoint, check the **Active** box (on the same row), to deactivate the waypoint, leave the check box blank.

NOTE: Waypoint tracking does not contain automatic switch off or duration options. The feature must be separately deactivated when it is no longer needed.

Resetting the coordinates

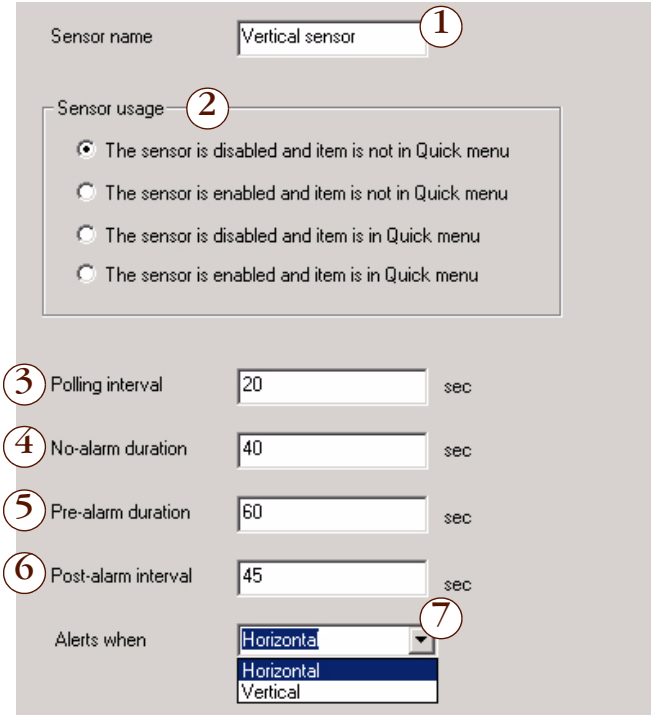
To reset the coordinate values, click the latitude and longitude data fields (the ones that you want to reset).

Marking all waypoints for activation/ deactivation at once

Click the **Active** box on the top row (5).

Note that activation/deactivation will actually take place only after you have transferred the information to the phone.

SENSOR SETTINGS: VERTICAL SENSOR



Sensor is an additional feature. The feature is activated by an activation key supplied to you by the manufacturer.

NOTE: The phone must also have specific battery which includes the sensor component, and NT 2.0 software installed.

The sensor unit transmits signal, indicating its status. The status can be, e.g. the orientation of the phone: Vertical or horizontal.

Signalling of the sensor unit can cause the phone to alert and send messages. When alerting, the phone uses current emergency environment settings. For more, see **TELEMATICS: EMERGENCY ENVIRONMENTS ON PAGE 42**. Also note that if the emergency environment option **Displays** is turned off, the various sensor notifications, such as **Starting alert...**, **Alerting**, and **Alert ended**, are not shown at all.

Sensor status is not monitored while the phone is connected to a charger.

Sensor can also be configured by MPTP over the air.

Naming the sensor

Key in the name for the sensor (1), e.g. Vertical sensor.

Specifying sensor usage

You can specify sensor usage (2).

The sensor can be turned on or off, and it can be defined to be or not to be shown and changeable in the Quick menu of the phone.

Polling interval

The phone polls the signal sent by the sensor from time to time. You can select, at which interval the polling is done, i.e. how often the status of the sensor is checked.

Set the polling interval (3) in seconds.

No-alarm duration

You can specify the time, for how long the phone is allowed to be in the wrong position (e.g. in horizontal position) before any actions are taken.

Set the no-alarm duration (4) in seconds.

Pre-alarm duration

You can specify "cancellation period" for false alarms. During the cancellation period, the user is alarmed that the emergency cycle is about to start soon.

Set the pre-alarm duration (5), i.e. "the cancellation period" in seconds.

During the cancellation period you will hear the pre-alarm tone. The tone can be muted by pressing the phone´s left function key **QUIET**. If the emergency environment is set to **Silent**, you will hear no tone at all.

NOTE: If the pre-alarm duration value is set to zero (0), there is no possibility to cancel the entire emergency cycle: The emergency cycle will start right away.

In order to cancel the emergency cycle, the sensor must regain normal signal during the cancellation period. An example: The vertical sensor starts alerting after it has been knocked down for too long a time. To cancel the emergency cycle, the phone must be lift up to vertical position while the cancellation period is still on.

Once the cancellation period is over, there is no possibility to prevent the emergency cycle to start. The phone does not poll the sensor signal during the emergency cycle.

Post-alarm interval

After the emergency cycle ends, the phone will make audible alarms at regular intervals. This is done to help any rescuers in locating the person in emergency. Also reception of phone calls is possible.

Key in the post-alarm interval (6) in seconds.

The phone polls the sensor signal during this phase. In order to stop the post-alarm tone, the phone must be lifted up to correct position.

Alert trigger

You can select alert trigger for the sensor (7). Click the arrow and highlight the desired option.

E.g. by selecting **Alerts when horizontal**, you determine that the sensor´s normal orientation is vertical, and being horizontally orientated causes sensor to alert.

The phone is assumed to be incorrectly orientated once the rotation angle exceeds 45°.

Missing sensor alert

If the special battery including the sensor unit is replaced by a normal battery, the phone becomes unable to detect the presence of a sensor. In this case, the phone will proceed as follows:

1. The phone will make audible alarm and display notification **Not detected**.
2. The phone will send an MPTP message to the service center. The message sent is a status message with status code 112, containing the phone´s last known position. For more information on this, see the separate MPTP document.
3. The phone will repeat the procedure each time it is powered up.

Vertical sensor alerts

To let the emergency cycle take place: Do nothing.

To cancel sensor alert and prevent emergency cycle from starting, lift the phone up to vertical position. Do it while the countdown timer is still shown.

To mute the audible alert tone, press the left soft key .

ENCRYPTING MESSAGES

SMS and MPTP messages can be protected from outsiders by encrypting message contents. Encryption is an additional feature. The feature is activated by an activation key supplied to you by the manufacturer.

The whole procedure:

First activate the feature, next generate the keys, then select the encryption options and finally save everything in the mobile phone.

NOTE: The phone must be connected to the Benefon Configurator software all the time during the procedure.

Activating encryption

To activate the feature, do as follows:

1. Connect the phone with the software.
2. Open **Save activation key** from the **Mobile** menu.
3. Key in the activation key and click **Save in mobile**.

Generating keys

You need two different keys for encryption.

- **Message encryption key**: The "long key" is needed for encrypting message contents.
- **Distribution key**: The distribution key is needed for encrypting the new message encryption key (while it is sent over the air). I.e. the distribution key secures the new message encryption key during OTA transfer.

NOTE: If you generate the new message encryption key and transfer it **locally** via the BW cable, the distribution key is not needed.

To generate the keys, do as follows:

1. Open **Encrypting**>**Encrypting keys** from the **Edit** menu.
2. Check the boxes and click **Generate**.
3. When generating the keys, the new keys will be created into the files. Select the destination directory, name the file and click **Save**. Name the other key file and click **Save** once again.
4. Click **Close**.

Selecting encryption options

1. Open **Encrypting**>**Encrypting settings** from the **Mobile** menu.
2. Select the options by checking the boxes. See below:

Encrypting based on message type

- SMS and MPTP messages are NOT encrypted.
- Only MPTP messages are encrypted.
- Only SMS messages are encrypted.
- Both SMS and MPTP messages are encrypted.

Encrypting based on destination

- Messages to service center and authorized numbers are NOT encrypted.
- Messages to service center are encrypted.
- Messages to authorized numbers are encrypted.
- Messages to service center and authorized numbers are encrypted.

3. Check the boxes in the **Save key in mobile phone**.
4. Finally save all the options and the keys by clicking the **Save in mobile phone** box in the bottom left. Browse the directory, find the key file and click **Open** (do it twice to save both keys).
5. You can also save the settings in a computer file by clicking the box **Save settings in file.** Browse the destination folder, key in the file name and click **Save** box.

MENU LOCKS AND ACCESS CODES

Security code for telematics and GPS

You can lock telematics and GPS settings and functions with the security code. If the lock is on, the security code is requested each time when powering up the system (software in connection with the phone) or attempting to enter telematics or GPS menus.

To set the security code, do as follows:

1. Select **Change security code** from the **Mobile** menu.
2. Check the desired boxes on the left: These are the functions which will be secured.
3. Key in the security code and click **Ok**.

Changing security code

You can change the security code as follows:

1. Select **Change security code** from the **Mobile** menu.
2. Click **Change security code** tile on the right.
3. Key in the old code, then key in the new code and confirm it.
4. Finally click **Ok**.

Menu lock for phone settings

You can lock phone settings with the phone code. If the lock is on, the phone code is requested each time when attempting to enter these menus: **Settings**, **Message settings**, or **Broadcast message settings**.

To set the menu lock, do as follows:

1. Select **Set menu lock** from the **Mobile** menu.
2. Key in the phone code and click **Ok**.
3. Check the box and click **Save in phone**.

User interface lock

You can lock user interface with the security code. When the user interface is locked, all the alphanumeric keys, special keys and lower side keys are locked. The only thing which can be done when the lock is on is to answer or drop an incoming call.

This lock has no effect on power key or BeneGuard button on the top.

To lock the user interface, do as follows:

1. Select **Set user interface lock** from the **Mobile** menu.
2. Key in the security code, and click **Ok**.
3. Check the box and click **Save in phone**.

TROUBLESHOOTING

"DUMMY QUESTIONS"

BENEFON CONFIGURATOR

Question/Problem	Answer/Check points
Today I have time to make configurations but the phone does not arrive until tomorrow.	You can make the configurations in advance. - To work in off-line, first select **Benefon Configurator** from the **Edit** menu and set **Benefon Track Pro NT 2.0** to be the default Benefon mobile phone. - Open a blank file by double-clicking the desired icon under the **My Computer** node. After making configuration, select **Save as..** from the **File** menu. - Select destination directory and name the file. Click **Save**. The software stores the information, the node contains. Each node must be stored separately. - When the phone arrives, make the cable connection and open the Benefon Configurator software. Click **Connect**. Select **Open** from the **File** menu and find the desired file. As the file is displayed, you can transfer settings to the phone by clicking **Save to mobile.**

NEW ADDITIONAL FEATURES

Question/Problem	Answer/Check points
I have purchased some new features, but none of them works.	Have you activated the new features? When you purchased the features, you got a **Service activation key**. You need to save the key in order to activate additional features. See PAGE 12.

SMS SERVICE NUMBER

Question/Problem	Answer/Check points
SMS service number, what is it used for?	- **SMS service number** is used for delivering normal short messages, but it can be used for delivering MPTP messages, as well. You get the number from your local network operator. You must store the number, e.g. in the datafield located in the **User settings**. See PAGE 20.
I found another data field for this same number in **Telematic settings**. What is it used for?	- The service provider may supply you with another, separate number for the MPTP messages. This is the way for ensuring that important messages are delivered in time if the normal SMS message centre is very busy and loaded with traffic all the time. See PAGE 30.

TRACE LOG

Question/Problem	Answer/Check points
The Benefon Configurator does not load the Trace log in the display.	- Ensure that the phone contains logged information (positions). The phone makes the log automatically when the GPS is used. - The **Read trace log** box must be checked in the Benefon Configurator. You will find it as follows: Open the **Edit** menu, select **Configurator..** and go to the **Mobile phone startup tasks** to check the box. - To load the log from the phone later on in the same session, select **Read trace log** from the **Mobile** menu.

EMERGENCY SETTINGS

Question/Problem	Answer/Check points
I cannot send emergency messages. I wonder whether I have forgotten some essential settings?	- Is there a valid SIM card inserted in the phone? - Have you stored **Emergency center numbers** and enabled them? See PAGE 39. - Have you pressed the Beneguard button in the same way, the **SOS activation** is configured? See PAGE 38. - Have you stored **SMS service number** in the phone? See PAGE 30. The number can also be the same which is used in normal short messages. See PAGE 20. - Have you transferred these settings in the phone? See PAGE 11.

EMERGENCY CONDITIONS

Question/Problem	Answer/Check points
Emergency settings are correct but sending emergency message does not work.	- Is there enough charge in the battery? The more bars in the battery indicator ( ), the better charge. If the battery is low, charge it or replace it with a charged battery. The phone can also be configured to send notifications of changes in battery status. See PAGE 50. - Is the message transmission working correctly? Deliveries of all messages, including MPTP messages, are fully handled by and in the responsibility of the GSM network operator and services can vary substantially. - The network might be busy at the very moment. By turning the **MPTP message storage** on, the phone will automatically try to resend the message later on. See PAGE 30. - Also make sure, the phone is not located in a shadow area at the moment. In order to operate correctly, there must be good GSM network signal, and adequate satellite coverage and the GPS antenna must have an obstructed view to sky.

EMERGENCY CYCLE

Question/Problem	Answer/Check points
How can I be sure that someone received the emergency message?	- Turn the **Emergency confirmation** setting on. This way the phone will continue sending the message until it gets acknowledgement message. See PAGE 39 . NOTE: Do not turn this feature on if the feature is not supported by the control system.
The phone makes noise while making emergency cycle. I want it to be quiet.	- Check the box **Silent** for **Active (emergency) environment**. - Also make sure, volume level is set to zero (volume tab located on the leftmost edge) in **Silent** profile. See PAGE 42.
What if I accidently press the Beneguard button; Is it possible to cancel the emergency cycle somehow?	- Set emergency cycle cancellation time for e.g. 7 seconds. See PAGE 38 . Then you can cancel the whole emergency cycle by pressing within 7 seconds. - If you have set emergency tones and displays on, you will also hear the cancellation tone and see the timer in the display. See PAGE 43.
What if it has already started, is it possible to cancel ongoing emergency cycle?	You cannot cancel the ongoing emergency cycle entirely, but you can cancel the rest of the emergency cycle by pressing and holding it down for about 5 seconds.

AUTHORIZATION AND AUTHORIZED NUMBERS

Question/Problem	Answer/Check points
I have set authorization on. What does that mean in practise?	When someone sends MPTP message to your phone, e.g. requesting your position, your phone will check that is this someone (i.e. the requesting number) permitted to ask your position. See PAGE 29. - If it is, the phone will send the position to the requesting number. - If it is not, the phone ignores the request (does not reveal your position to the requesting number), or sends the position to the service center number (if the number is configured).
How do I know that a number is authorized?	Authorized numbers are: - **Service center number**, and all numbers stored in the list of **Emergency center numbers**, and all numbers stored in the list of **Authorized numbers**. If the requesting number is not found in any of these places, the number is unauthorized. See PAGE 32, and PAGE 39, and PAGE 44.
I wanted to track my friend´s phone, but the position updates were sent to the service center number, instead of my number. Authorization was turned off. What happened?	Sending position updates to the requesting, unauthorized number (like your number) is possible under these conditions: - **Authorization** is off - no permission is needed for e.g. activating tracking. AND - **Service center number** is removed.

STATUS MESSAGES

Question/Problem	Answer/Check points
I cannot send status messages. Have I forgotten some essential settings?	- Is there a valid SIM card inserted in the phone? - Have you created **Status messages**? See PAGE 29. - Have you stored **SMS service number** in the phone? See PAGE 30. The number can also be the same which is used in normal short messaging. See PAGE 20. - Have you stored the destination number for status messages? The number is **Service center number**. See PAGE 32. - Have you selected status messages for **Primary use for emergency button**? See PAGE 32. - When status messages are enabled, **SOS activation** must be configured for **Long press**. See PAGE 38. - Have you pressed the Beneguard button correctly? For status messages, press the button quickly twice. - Have you transferred the settings in the phone? See PAGE 11.

STATUS MESSAGES

Question/Problem	Answer/Check points
Settings for status messages are correct but sending status messages does not work.	- Is the message transmission working correctly? Deliveries of all messages, including MPTP messages, are fully handled by and in the responsibility of the GSM network operator and services can vary substantially. - The network might be busy at the very moment. By turning the **MPTP message storage** on, the phone will automatically try to resend the message later on. See PAGE 30. - Also make sure, the phone is not located in a shadow area at the moment. In order to operate correctly, there must be good GSM network signal. - Is there enough charge in the battery? The more bars in the battery indicator (▮▮▮▯), the better charge. If the battery is low, charge it or replace it with a charged battery. The phone can also be configured to send notifications of changes in battery status. See PAGE 50.
I would like to distinquish status messages from each other somehow, e.g. by location or company´s name. Is it possible?	You can add some unique information for each status message when sending it. - Select **Advanced** for **Status message usage**. See PAGE 29.

VERTICAL SENSOR SETTINGS

Question/Problem	Answer/Check points
Vertical sensor does not work.	- When you purchased the feature, you got a **Service activation key.** You need to save the key in order to activate the feature. See PAGE 12. - The phone must have special battery including the sensor component. Contact the dealer or manufacturer to get such battery. - Ensure that NT 2.0 software is installed in the phone. Vertical sensor does not work with the NT 1.0 software. For more information, contact the dealer of manufacturer. - The sensor feature must be turned on. See **Specifying sensor usage** on PAGE 54.
What does the sensor alert actually mean - if I do not cancel it, what is going to happen next?	When the phone has been knocked down for too long a time and the cancellation period has been expired, the phone will make an emergency cycle, i.e. send emergency messages (including last known position) and make emergency calls. The destination numbers are the same ones used in Emergency cycle, i.e. the **Emergency center numbers**. Ensure that they are stored and enabled correctly. See PAGE 39. Also check the settings below: **Sensor settings**. See PAGE 53. **Emergency environments**. See PAGE 42.

VERTICAL SENSOR ALERTS

Question/Problem	Answer/Check points
What if I lose my balance and fall down for just a few seconds when walking on a slippy road. Does the sensor start alerting right away?	You can set the sensor so that it allows some time to pass before it reacts to this kind of momentary tumble. Key in a value to **No-alarm duration**. See PAGE 54.
Is there any way to cancel the sensor alert once this allowed time (i.e. **No-alarm duration**) passes by?	Yes. By keying in a value to **Pre-alarm duration**, you can determine "cancellation period" for the sensor alert. When the sensor starts alerting, the countdown timer shows the time, during which you can still cancel the alert (by lifting the phone up). See PAGE 54.
The sensor makes annoying sounds during cancellation period. Is there any way to get it silenced?	To silence the sensor tone permanently, set the volume level to zero (volume tab located on the leftmost edge) in the activated emergency environment. See PAGE 42. To mute the sensor tone momentarily, press the left soft key .
The emergency cycle is over, and the sensor is still making sounds - every other minute. Is there any way to get it muted?	Yes. Lift the phone to vertical position. The phone will make sounds in order to help rescuers to find you in case you are half-dead, unable to move yourself or use your own voice. You can also determine, how often the sound is made by setting a value for **Post-alarm interval** on PAGE 55.
I would like to use the sensor as Horizontal sensor.	The Vertical sensor turns to be Horizontal sensor as you set **Alerts when vertical**. (instead of **Alerts when horizontal**). See PAGE 55.